



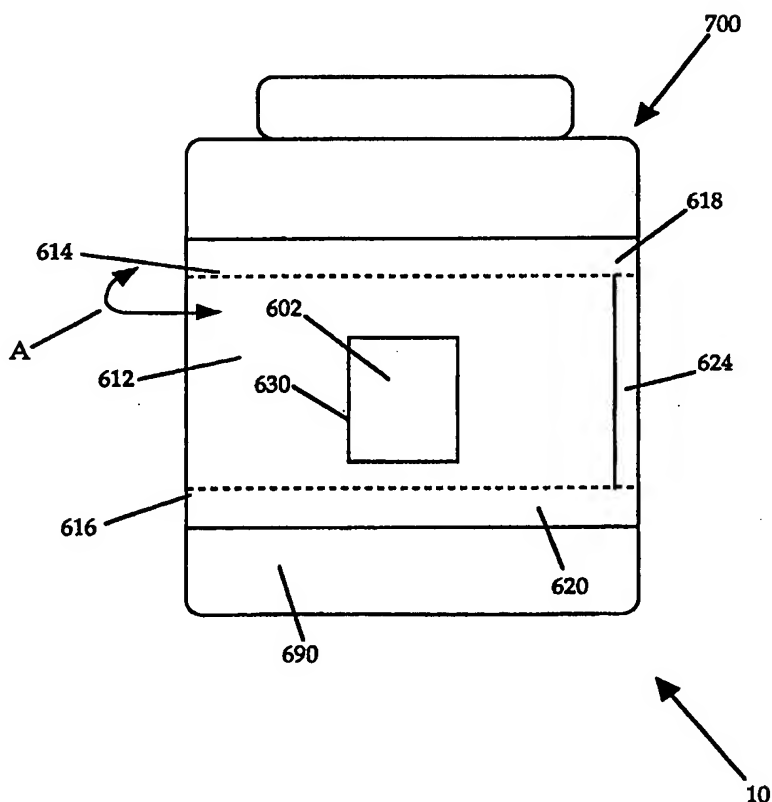
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(54) Title: APPARATUS AND METHOD FOR CONSTRUCTING A ROTATABLE LABEL DEVICE

(57) Abstract

An apparatus and method for constructing a rotatable label device and attaching it to a container. The rotatable label device includes an inner shell (547, 556) and an outer shell (548, 562) concentrically and rotatably mounted to the inner shell. Either the container (546, 554), the inner shell or the outer shell may include a set of rims (550, 552, 558, 560) for limiting the movement of the outer shell along the axis of the container. These rims may be created by detaching perforated sections of an outer label. The rotatable label device may be attached to the container in one step by first tacking the inner shell to the outer shell, mounting the combined unit and then separating the inner shell from the outer shell.



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APPARATUS AND METHOD FOR CONSTRUCTING A ROTATABLE LABEL
DEVICE

CROSS-REFERENCE TO RELATED APPLICATIONS

5 The present application is a continuation-in-part of U.S. Patent Application
Serial No. 08/597,854, filed February 7, 1996, invented by Stephen M. Key, entitled
"System And Method Using A Double-Walled Rotatable Device For Presenting
Information On A Pharmaceutical Container." The subject matter is herein
incorporated by reference.

10

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates generally to rotatable labels, and more particularly to
an apparatus and method for constructing a rotatable label device.

15 2. Description of the Background Art

Presentation is a significant concern of artists, merchants, and consumers
alike, since presentation can greatly enhance or diminish the effect of an intended
message. In many cases, presentation techniques and the information are
inseparable, making the presentation format equivalently important.

20 Information, including artwork, has been presented in a multitude of formats,
ranging from the simple picture frame to modern electronic video displays. An
important consideration in selecting a presentation format is the application and
audience intended for the particular message. For example, commercial art uses
advertising and product labeling to market a particular product to a consumer

audience. Another consideration for artists, merchants and consumers is the cost of presenting the information. Expensive materials or state-of-the-art technologies can substantially add to the cost of the final product.

An exemplary presentation device, as disclosed in U.S. Patent Serial Number 5,342,093, consists of a wrap-around label having a contact portion, an overlap
5 portion, a transparent release coating and an adhesive coating. The overlap portion may be peeled away from the contact portion to expose the front surface of the contact portion.

A second exemplary presentation device, as disclosed in U.S. Patent Serial
10 Number 5,154,448, consists of a layered scratch-off label for containers which includes a thin scratchable surface layer that can be scratched off to reveal a second layer underneath the surface layer.

A third exemplary presentation device, as disclosed in U.S. Patent Serial Number 2,860,431, consists of a can having a welded center section, a top coupled
15 to the center section by a top bead, and a bottom coupled to the center section by a bottom bead. An inner label containing information is attached to the center section of the can. A rotatable outer sleeve with an opening is fitted around the inner label so that information on the inner label is viewable through the opening. The '431 patent's presentation device however has several limitations. First, if the can is very
20 tall, a typical user will not be able to hold the top and bottom of the can between the user's thumb and forefingers of one hand while rotating the outer sleeve with the user's other hand. Second, the '431 patent does not disclose how to keep the outer sleeve securely in place if the top and bottom beads are not present on the can.

These presentation devices permit separate elements of the information to interact by physically changing positions. However, the usefulness of these devices is limited either because the viewer has little control over the interactive movement of the message elements or because manufacturing the devices is too expensive.

- 5 Therefore, an improved apparatus and method is needed to present information on a container in a way that permits a greater degree of user-controlled interaction and that is more economical.

SUMMARY OF THE INVENTION

An apparatus and method are disclosed for constructing a rotatable label device and attaching it to a container. The rotatable label device includes an inner shell and a outer shell having a transparent region, wherein the outer shell is

5 concentric to and rotatable with the inner shell. Background messages are applied to the outer surface of the inner shell, and foreground messages are applied to either surface of the outer shell, so long as they can be viewed from the outer surface of the outer shell. When the outer shell and inner shell are rotated with respect to each other, the foreground and background messages visibly interact. Either the

10 container, the inner shell or the outer shell may be affixed with rims to limit movement of the shells along the container's axis. These rims may be formed on the container as part of the container's design. The rims may be formed on the shells by gluing strips to the shell, folding the shell's ends, or embossing the ends of the shell. Alternately, one of the shells could be perforated and glued to the other shell such

15 that once the perforations are broken the rims are formed. To aid rotation of the outer shell about the inner shell, a grasping area may be provided on the container for a user to hold while rotating the outer shell.

Alternate embodiments of the present invention include an outer shell having multiple segments that are independently rotatable about the inner shell. The outer

20 shell may or may not have windows. The outer shell's segments may be separated by perforations that remain intact as the outer shell is fitted about the container and separated when a user decides to rotate the segments independently. The inner shell may be attached to the outer shell with a permanently adhesive tacking substance, forming a combined shell. The combined shell may then be attached to the

container in one step with a labeling machine such that the inner shell is permanently affixed to the container. Finally, perforations on the inner or outer shell are broken by a user, thus allowing the outer shell to rotate about the inner shell and the container.

- 5 Thus, the present invention provides an additional surface for information, which results in about 75% more space for advertisements, instructions, precautions, larger type, additional languages and the like.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a side elevational view of an embodiment of the inner shell with an attached outer shell having two sets of structural perforations;

Figure 2 is a perspective view of the embodiment of the invention in Figure
5 1;

Figure 3 is a perspective view of the inner shell with a portion of the outer shell removed therefrom after the two sets of structural perforations have been broken and torn;

Figure 4 is a planar view of the notches of the corrugated edge of the upper
10 portion and of the notches of the corrugated edge of the outer shell body;

Figure 5 is a planar view of the notches from both corrugated edges of Figure 4 integrally interconnected to produce a set of structural perforations;

Figure 6 is a sectional view of another double-walled rotatable presentation device (i.e. an outer shell rotatably disposed around an inner shell) attached to a
15 container;

Figure 7 is a combined perspective and sectional view of a container having an inner shell secured thereto with an outer shell rotatably supported by the inner shell and rotatably disposed around the inner shell;

Figure 8 is a plan view of an inner shell with a pair of opposed rim members
20 and an outer shell flattened out and laid side-by-side;

Figure 9 is a planar view of the front of an inner shell;

Figure 10 is a planar view of the back of the inner shell of Figure 9 having an adhesive substance disposed thereon for securing the inner shell to a container;

Figure 11 is a planar view of the front of an outer shell having a window or transparent region and a lug or tab member and with two sets of structural perforations;

Figure 12 is a planar view of the back of the outer shell of Figure 11 illustrating a pair of opposed outer side portions having an adhesive substance disposed thereon for securing the pair of opposed outer side portions to the inner shell, and further illustrating the lug or tab member also having an adhesive substance disposed or layered thereon for securing the lug or tab member to the outer shell to form a generally cylindrical outer shell member that may rotate around the face of the inner shell member when the outer shell member is torn away from the pair of opposed outer side portions along the two sets of structural perforations;

Figure 13 is a planar view of the outer shell of Figures 11 and 12 superimposed over the front of the inner shell of Figure 9 and having the pair of opposed outer side portions secured to the front of the inner shell; and

Figure 14 is a perspective view of a container having the back of the inner shell of Figure 13 glued, stuck or otherwise attached to the container such that the front of the outer shell of Figure 13 encirculates the cylindrical sides of the container;

Figure 15 is a plan view of an outside surface of a generally trapezoidal shaped outer shell;

Figure 16 is a plan view of an inside surface of the outer shell of Figure 15;

Figure 17 is a perspective view of a container including an upper rim;

Figure 18 is a perspective view of the container of Figure 17 having an inner shell secured to the sides thereof and having an outer shell rotatably disposed around the inner shell;

Figure 19 is a perspective view of a container containing advertising indicia
5 on its outer surface;

Figure 20 is a plan view of a generally trapezoidally shaped outer shell including a window or transparent region and advertising indicia;

Figure 21 is a perspective view of the outer shell of Figure 20 disposed around the outer surface of the container of Figure 19;

10 Figure 22 is a plan view of an outside surface of an outer shell having pictorial indicia thereon and subdivided by sets of structural perforations into a first, a second, and a third segment;

Figure 23 is a plan view of an inside surface of the outer shell of Figure 22;

Figure 24 is a perspective view of a container having the outer shell member
15 of Figure 22 disposed therearound;

Figure 25 is a perspective view of the embodiment of the invention in Figure 24 where the second segment of the outer shell has been rotated into a second alignment with respect to the first and third segments; and

Figure 26 is a flowchart of a method for attaching in one-step an inner shell
20 and an outer shell to a container.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The present apparatus is a double-walled rotatable presentation device which permits a user to control a visual interplay between separate layers of information. The device, generally illustrated as 10, includes one or more shells (i.e. rotatable label(s), preferably rotatably mounted on a container. The device 10 may be manufactured from any suitable material and is capable of many different embodiments, and can incorporate any information or graphic artwork or any other type of indicia. The information could include alphanumeric data alone or in conjunction with other types of graphic artwork. Further, the rotatable presentation device may be incorporated into a wide range of products as a unique feature of the product. In addition to purely aesthetic uses, the rotatable presentation device may be used for education, entertainment, pharmaceutical or utilitarian purposes.

Referring now to Figures 1-5, an embodiment of the present invention wherein an inner shell 513 has an outer shell material 516 attached thereto, is shown. The outer shell material 516 has an outer shell body 523 and an upper portion 519 and a lower portion 520 respectively separated from the outer shell body 523 by a first set of perforations 517 and a second set of perforations 518. The inner shell 513 preferably performs the same functions as inner shell 410 shown in Figure 13 and may be formed from any of the previously identified suitable materials. The inner shell 513 is comprised of an inner shell material 514 that is connected to the outer shell material 516 by an adhesive substance 526. More specifically and as best shown in Figure 2, the inner shell material 514 is secured to the upper portion 519 and to the lower portion 520 of the outer shell material 516 with the adhesive

substance 526. The upper portion 519 has a corrugated edge 519a (see Figure 4) with notches 519b; and the outer shell body 523 (see Figure 4 again) has a corrugated edge 523a with notches 523b. As best shown in Figure 5, notches 519b and notches 523b integrally interconnect to produce the set of structural perforations 517. It is to be understood that whenever any set of structural perforations are mentioned hereinafter, such set of structural perforations inherently includes notches of one corrugated edge connecting integrally with notches of another corrugated edge.

Figure 2 is a perspective view of the alternate embodiment of Figure 1. Forces (rotational forces) along a line P-Q on the outer shell material 516 cause the first and second set of perforations 517, 518 to break, freeing the outer shell body 523 of the outer shell material 516 from the upper portion 519 and from the lower portion 520, both of which remain secured to the inner shell 513, more specifically to the inner shell material 514. The freed outer shell body 523 is now available to be rotated around the inner shell 513 as desired. Figure 3 is a perspective view of the inner shell 513 after the perforations 517 and 518 have been broken. After the perforations 517 and 518 are broken, the upper portion 519 becomes an upper rim 521 and the lower portion 520 becomes a lower rim 522, thus creating the inner shell 513 which now may be secured to cylindrical sides of any container via any suitable adhesive substance (i.e. adhesive substance) disposed on the back of the inner shell 513.

The adhesive substance 526 for the present invention may be any inorganic or organic, natural or synthetic substance that is capable of bonding together any of

the structural elements or members of the present invention by surface attachment.

A suitable adhesive substance 526 is glue or any other similar suspension of various proteinaceous materials in water, well known to those possessing the ordinary skill in the art. Additional suitable adhesive substances would include soluble silicates (water glass); calcium oxide-silica; silica-boric acid; fish glue; organic vegetable
5 glues including cellulose, rubber latex and rubber-solvent (pressure-sensitive), mucilages; polysulfide sealants; silicone polymers and cements; and thermosetting epoxy, phenolformaldehyde, polyvinyl butyral and cyanoacrylates.

10 Figure 6 is a sectional view of another embodiment of the present invention wherein an inner shell 547 is shown as encircling and being securely attached to the container 546 by the adhesive substance 526. The inner shell 547 has opposed edges 547a and 547b. An outer shell 548 includes an upper rim 550 and a lower rim 552. The upper rim 550 and the lower rim 552 can be formed with and/or on the outer
15 shell 548 by perforating, as described above. As the outer shell 548 rotates about the inner shell 547 and the container 546, the upper rim 550 and the lower rim 552 slideably engage the opposed edges 547a and 547b of the inner shell 547. The upper rim 550 and the lower rim 552 keep the outer shell 548 longitudinally positioned about the inner shell 547 during rotation.

20

Figure 7 is a combined perspective and sectional view of a container 554 having an inner shell 556 and an outer shell 562 shown in section. The inner shell 556 is connected to the container 554 by the adhesive substance 526 and includes an upper rim 558 and a lower rim 560 which limits movement of the outer shell 562

along the A-B axis of the container 554. The inner shell 556 is positioned along the A-B axis to provide a top grasping area 564 towards a top of the container 554 and a bottom grasping area 566 towards a bottom of the container 554. These grasping areas 564, 566 provide a surface area on the container 554 for a user to hold the container 554 while rotating the outer shell 562 and reading a set of information printed on the inner shell 556 and/or the outer shell 562. For example, if information was printed from left-to-right (i.e. around the container's circumference) on the shells 556 and 562, a user would most likely hold the bottom grasping area 566 while rotating the outer shell 562. However, if information was printed from top-to-bottom on the shells 556 and 562, a user would most likely hold the top grasping area 564 while rotating the outer shell 562. In alternate embodiments, container 554 may contain only the top grasping area 564 or the bottom grasping area 566.

In the above discussion it has been shown how a container, an inner shell and an outer shell can each include a set of rims. In some embodiments of the present invention the inner shell included two rims and the outer shell included no rims. In other embodiments the container included one rim, the inner shell included one rim and the outer shell included no rims. And, in yet other embodiments, the inner shell included no rims and the outer shell included two rims. Those skilled in the art will thus know that the container, the inner shell and the outer shell may each include a set of rims, wherein the set of rims may include any number of rims or no rims at all.

Figure 8 is an exploded plan view of an inner shell 568 and an outer shell 574 flattened out and laid side-by-side. The outer shell 574 is longer in length than

the inner shell 568 by an amount shown by a lug or tab shown as extension area B 580. The inner shell 568 includes an upper rim 570 and a lower rim 572 and the outer shell 574 includes a window 576, an area A 578 and the extension area B 580. The inner shell 568 is attachable to a container (not shown) by wrapping the inner
5 shell 568 around the container and securely fixing the inner shell 568 to the container, such as with the adhesive substance 526. The outer shell 574 is movably positionable about the inner shell 568 between the upper and lower rims 570 and 572 by wrapping the outer shell 574 around the inner shell 568 and securely fixing area A 578 to the extension area B 580. More specifically, the lug or tab represented by
10 the extension area B 580 would typically overlap onto the fixing area A 578 with the adhesive substance 526 affixing the lug or tab 580 to the area A578.

Referring now to Figures 9 - 14 there is seen an inner shell, generally illustrated as 600, having a front 602, a back 604, and the adhesive substance 526
15 disposed or layered on the back 604. The inner shell 600 (see Figure 9) has a width W. An outer shell, generally illustrated as 610, is seen in Figures 11 and 12 as having the same width W as the inner shell 600. The outer shell 610 has an outside surface 612 between a pair of sets of perforations 614 and 616. The outer shell 610 includes a pair of opposed outer side portions 618 and 620 which are releasable
20 when the sets of perforations 614 and 616 are torn or broken. The outer shell 610 is formed with an ear or lug 624 and includes a window or transparent region 630. As best shown in Figure 12, the adhesive substance 526 is disposed on the back of the outer side portions 618 and 620 and the back of the ear or lug 624. The outer shell 610 is secured to the front 602 of the inner shell 600 by superimposing the outer

shell 610 over the inner shell 600 (see Figure 13) and pressing the outer side portions 618 and 620 against the front 602 of the inner shell 600 such that the adhesive substance 526 on the underside of the outer side portions 618 and 620 bind the outer side portions 618 and 620 (and inherently the entire outer shell 610 itself) to the inner shell 600. Subsequently, the combination of Figure 13 is secured to a cylindrical side 690 of a container 700 (see Figure 14) by encircling the cylindrical side 690 with the combination and pressing the back 604 of the inner shell 600 against the cylindrical side 690 such that the adhesive substance 526 may take its associated binding effect. Obviously, the immediate foregoing procedure may be reversed by initially securing the inner shell 600 to the cylindrical side 690 of the container 700 and subsequently securing the outer shell 610 to the front 602 of the inner shell 600 in the manner described above. As (or immediately thereafter) the combination of Figure 13 is being secured to the cylindrical side 690 of the container 700, the ear or lug 624 overlaps onto the outside surface 612 of the outer shell 610 such that the adhesive substance 526 (see Figure 12) on the bottom of the ear or lug 624 may bind the ear or lug 624 onto and against the outside surface 612 of the outer shell 610 as best shown in Figure 14. As will be seen for the embodiment of the invention depicted in Figures 15 - 25, rotational force (and preferably some pressure) in direction of the arrow A in Figure 14 breaks or tears along the sets of perforations 614 and 616 causing the outer side portions 618 and 620 to be released from the outer shell 610 such that the outer shell 610 may rotate freely around the inner shell 600 between the affixed outer side portions 618 and 620 which are now functioning as rim members or elements.

Referring now to Figures 15 - 18, there is seen in Figure 15 a plan view of an outside surface of an outer shell 602 which is generally trapezoidal in shape to conform to a downwardly tapering container. The outer shell 602 includes an outer surface 602a, a window 604, an extension area (or lug/tab) 606, and a set of structural perforations 608. Figure 16 is a plan view of an inside surface of the outer shell 602. The adhesive substance 526 is applied to an area of the inside surface of the outer shell 602 below the set of perforations 608 and within the extension area or lug 606. The section of the outer shell 602 below the set of perforations 608 is being designated as a lower rim 624 since it will break away from the outer shell 602 and become a lower rim to provide a surface which supports the outer shell 602. As best shown in Figure 18, the outer shell 602 is wrapped around a downwardly tapering container 620. The outer shell 602 is secured about and/or around the container 620 when the adhesive substance 526 on the extension area or lug 606 contacts the outer surface 602a of the outer shell 602. The outer shell 602 is secured initially to the container 620 when the adhesive substance 526 on the area (i.e. the lower rim 624) of the outer shell 602 below set of perforations 608 contacts the container 620. After the adhesive cures, rotational force applied along the vector or arrow P-Q, breaks the set of perforations 608. Once the perforations 608 are broken, the area of the outer shell 602 below the perforation 608 remains attached to the container 620 and becomes the lower rim 624 as previously indicated. The area of the outer shell 602 above the perforation 608 is free to rotate about the container 620 while being bounded by an upper rim 622 of the container 620 and the lower rim 624 that broke away from the outer shell 602. Alternatively, if the container 620 is tapered, as shown in Figure 17, the outer shell 602 need not extend all the way up to the upper

rim 622 of the container 620 to remain bounded, since the taper of container 620 prevents the outer shell 602 from moving towards the upper rim 622.

Figure 19 is a perspective view of a container 630 containing information 632 on its outer surface. Figure 20 is a plan view of an outer shell 634 including a window 636, a set of structural perforations 637 below which exist a lower rim 639, and information 638. The lower rim 639 has the adhesive substance 526 on an underside (not shown) thereof to engage the container 620. More particularly and as shown in Figure 21, a perspective view illustrates the outer shell 634 wrapped around the container 630 in the same manner discussed with respect to Figure 18 above. The lower rim 639 breaks away with appropriate rotational force such as vector P-Q. In this alternate embodiment 640, window 636 of the outer shell 634 allows the information 632 on the container 630 to be seen. After the set of perforations 637 are broken and the outer shell 634 is rotated, the window 636 may also reveal phrases such as "You're a Winner!" or "Sorry Try Again."

Referring in detail now to Figures 22 - 25 for yet another embodiment of the present invention, there is seen in Figure 22 a plan view of an outside surface of an outer shell 642. The outer shell 602 includes an extension area 643, a first set of perforations 644, a second set of perforations 646, and a third set of perforations 648. The outside surface and the outer shell 642 includes pictorial indicia 642a. Figure 23 is a plan view of an inside surface of the outer shell 642. The adhesive substance 526 is preferably applied to an area of the inside surface below the third set of perforations 648 and also to the extension area or lug 643. As best shown in

Figure 24, the outer shell 642 is wrapped around the container 652 until the adhesive substance 526 on the extension area or lug 643 contacts an outer surface 642b of the outer shell 642, and until the adhesive substance 526 on the area of the outer shell 642 below the third set of perforations 648 contacts the container 652. After the adhesive cures, rotational forces break the first, second and third perforations 644, 646, 648. Once all of the sets of perforations are broken, the area of the outer shell 642 above the first set of perforations 648 becomes a first segment 655, the area of the outer shell 642 between the first set of perforations 648 and the second set of perforations 644 becomes a second segment 654, the area of the outer shell 642 above the third set of perforations 644 becomes a third segment 653, and the area of the outer shell 642 below the third set of perforation 648 remains attached to the container 652 and becomes a lower rim 656. Each of the segments 653, 654, 655 are free to independently rotate about the container 650 so that information on each of the segments 653, 654, 655 may be aligned at the discretion of a user. For instance, Figure 24 shows the second segment 654 in a first alignment with respect to the first and third segments 655 and 653. Figure 25 is a perspective view where the second segment 654 is in a second alignment with respect to the first and third segments 655 and 653. Those skilled in the art will recognize that the segments 653, 654, 655 may or may not have windows and may be rotated in any desired manner and in any desired sequence.

Figure 26 is a flowchart of a method for attaching in one-step an inner shell and an outer shell to a container. In step 2602, an inner shell and an outer shell are selected for forming a label. In step 2604, the inner shell is attached to a perforated

outer shell to form a combined shell. In step 2606 the labeling machine attaches the combined shell to a container in one step such that the inner shell is permanently affixed to the container. In step 2608 a user breaks the perforations by rotating the outer shell while the inner shell stays permanently affixed to the container. The embodiment of the invention shown in Figures 9 - 14 and as previously described would depict one embodiment of the immediate foregoing method performed by a labeling machine.

The invention provides other embodiments which will be apparent to those skilled in the art in light of this disclosure. For example, by placing different sets of alphanumeric information on each of the shells, the presentation device 10 can be used to provide translations of text into another language, or to supply correct medication dosages. Also, if an outer shell's transparent window area is as long as an outer shell in the direction of rotation as a line of printed text is high, then the window can be rotated to reveal one line of text at a time from an inner shell. This allows a container label with relatively rotatable inner and outer shells to present twice the amount of text, minus one line for the window, that could be displayed on a conventional label. Further, the presentation device 10 may be incorporated into a wide range of products as a unique feature of the product. Items which might incorporate the presentation device include containers such as food products or cosmetics cases, and packaging such as food, drug or candy dispensers. The device could also be incorporated into children's toys or playthings and into tools, such as flashlights, pens, markers, hair-care utensils, or silverware. In addition to purely aesthetic uses, the device can readily be used for education, entertainment, or

utilitarian purposes. Therefore, the preferred embodiment disclosed herein is only one of many possible embodiments for implementing the device to present interacting elements of visual artwork. These and other variations upon, and modifications to, the preferred embodiment are intended to be covered by the present

5 invention, which is limited only by the appended claims.

1. A rotatable label apparatus comprising a container;
an inner shell member secured to said container and including at least one rim member;
an outer shell member having a transparent region and rotatably supported by said at least one rim member of said inner shell member.
- 5 2. The rotatable label apparatus of Claim 1 wherein said container is a cylindrical container and said outer shell member is a cylindrical outer shell member disposed around said inner shell member such as to be generally coaxial with said cylindrical container.
- 10 3. The rotatable label apparatus of Claim 1 wherein said inner shell member includes an inner end portion and an inner shell surface that is capable of being seen through said transparent region of said outer shell member, said inner end portion being superimposed over at least a portion of said inner shell surface to define said rim member.
- 15 4. The rotatable label apparatus of Claim 2 wherein said inner shell member includes an inner end portion and an inner shell surface that is capable of being seen through said transparent region of said outer shell member, said inner end portion being superimposed over at least a portion of said inner shell surface to define said rim member.
- 20 5. The rotatable label apparatus of Claim 1 wherein said inner shell member includes an inner end portion, said inner end portion being askewed from having been embossed such that said askewed inner end portion defines said rim member.

6. The rotatable label apparatus of Claim 2 wherein said inner shell member includes an inner end portion, said inner end portion being askewed from having been embossed such that said askewed inner end portion defines said rim member.
- 5 7. The rotatable label apparatus of Claim 1 wherein said inner shell member includes an inner end portion, and said rotatable label apparatus additionally comprises a rim element secured to said inner end portion to define said rim member.
8. The rotatable label apparatus of Claim 2 wherein said inner shell member includes
10 an inner end portion, and said rotatable label apparatus additionally comprises a rim element secured to said inner end portion to define said rim member.
9. The rotatable label apparatus of Claim 1 wherein said inner shell member includes an inner end portion, and said outer shell member has an outer shell structure with at least
15 one set of structural perforations traversing the outer shell structure, said outer end portion being bound to said inner end portion.
10. The rotatable label apparatus of Claim 9 wherein said inner end portion has an inner corrugated edge and said outer end portion has an outer corrugated edge, said inner
20 corrugated edge being coupled to said outer corrugated edge to produce said set of structural perforations such that when the outer shell structure of the outer shell member is torn along said set of structural perforations, said outer end portion remains bound to said inner end portion.

11. The rotatable label apparatus of Claim 1 wherein said outer shell member has an outer shell structure defining at least one structural recess wherein said rim member of said inner shell member lodges to slidably support said outer shell member.

5 12. The rotatable label apparatus of Claim 11 wherein said outer shell member comprises a first generally planar surface, and a second generally planar surface off-set from said first generally planar surface and separated from said first generally planar surface by said structural recess.

10 13. The rotatable label apparatus of Claim 10 wherein said outer shell member comprises a first outer shell end and a second outer shell end and an outer shell surface between said first outer shell end and said second outer shell end;

and a lug member bound to said second outer shell end and having an adhesive substance disposed thereon, said lug member overlapping said first outer shell end to
15 contact said outer shell surface with said adhesive substance to engage said lug member to said outer shell surface.

14. A rotatable label apparatus comprising a container;
an inner shell member secured to said container;
20 an outer shell member having a transparent region and at least one rim member, said rim member slidably engaging said inner shell member such that said outer shell member is rotatably supported by said inner shell member.

15. A rotatable label apparatus comprising a container;

an outer shell member having a transparent region and an outer shell structure with at least one set of structural perforations traversing the outer shell structure to form an outer side portion that may be released from said outer shell structure along said set of structural perforations, said outer side portion having a first adhesive substance disposed thereon and binding said outer side portion to said container;

said outer shell member including a first outer shell end and a second outer shell end and an outer shell surface between said first outer shell end and said second outer shell end;

a lug member bound to said second outer shell end and having a second adhesive substance disposed thereon, said lug member overlapping said first outer shell end to contact said outer shell surface with said second adhesive substance to engage said lug member to said outer shell surface.

16. A rotatable label apparatus comprising a container;

an outer shell member having indicia and an outer shell structure with at least one set of structural perforations traversing the outer shell structure to form an outer side portion that may be released from said outer shell structure along said set of structural perforations, said outer side portion having a first adhesive substance disposed thereon and binding said outer side portion to said container;

said outer shell member including a first outer shell end and a second outer shell end and an outer shell surface between said first outer shell end and said second outer shell end;

a lug member bound to said second outer shell end and having a second adhesive substance disposed thereon, said lug member overlapping said first outer shell end to contact said outer shell surface with said second adhesive substance to engage said lug member to said outer shell surface.

5

17. A rotatable label apparatus comprising a container;

an inner shell member secured to said container;

an outer shell member having a transparent region and an outer shell structure with at least one set of structural perforations traversing the outer shell structure to form an

10 outer side portion that may be released from said outer shell structure along said set of structural perforations, said outer side portion having a first adhesive substance disposed thereon and binding said outer side portion to said inner shell member;

said outer shell member including a first outer shell end and a second outer shell end and an outer shell surface between said first outer shell end and said second outer

15 shell end;

a lug member bound to said second outer shell end and having a second adhesive substance disposed thereon, said lug member overlapping said first outer shell end to contact said outer shell surface with said second adhesive substance to engage said lug member to said outer shell surface.

20

18. A method for applying a rotatable label device to a container, comprising the steps of:

(a) selecting a tacking substance that is permanently adhesive;

(b) attaching an inner shell to an outer shell with the tacking substance to form a combined

5 shell, said outer shell including a set of perforations;

(c) attaching the combined shell to a container in one step with a labeling machine such

that the inner shell is permanently affixed to the container; and

(d) rotating the outer shell so as to break the outer shell free from the inner shell along the set of perforations.

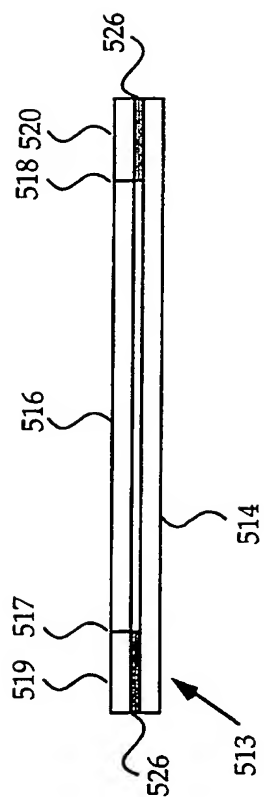


Fig. 1

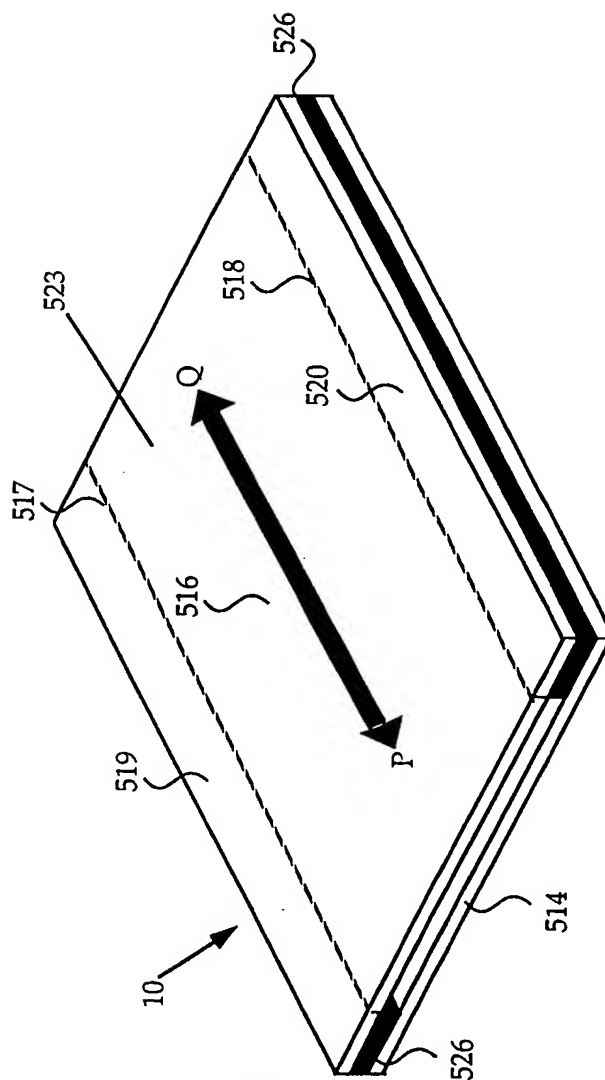


Fig. 2

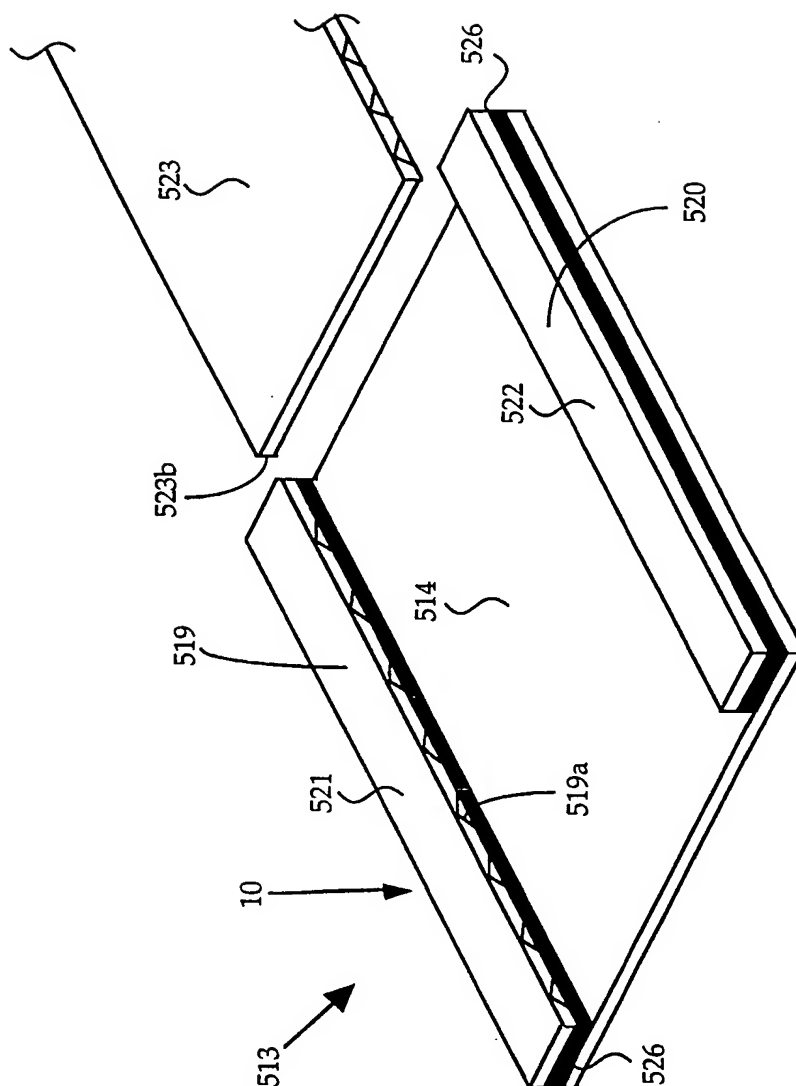


Fig. 3

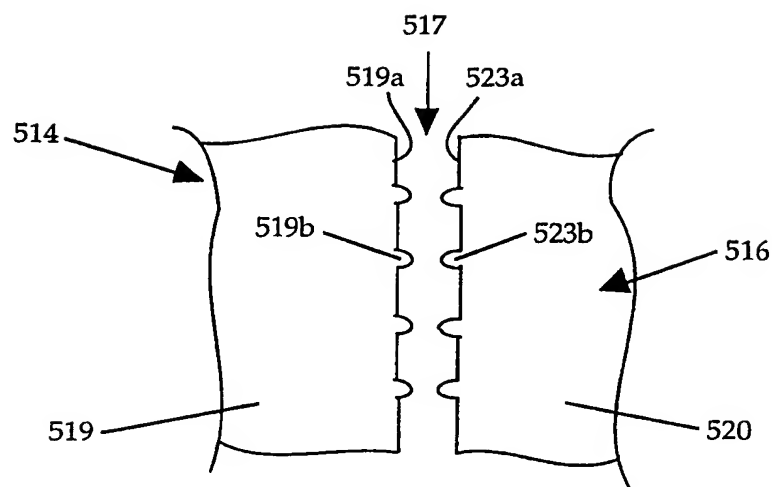


Fig. 4

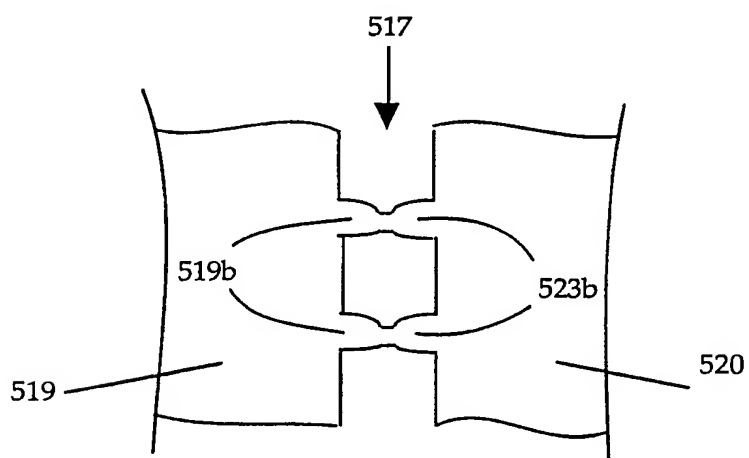


Fig. 5

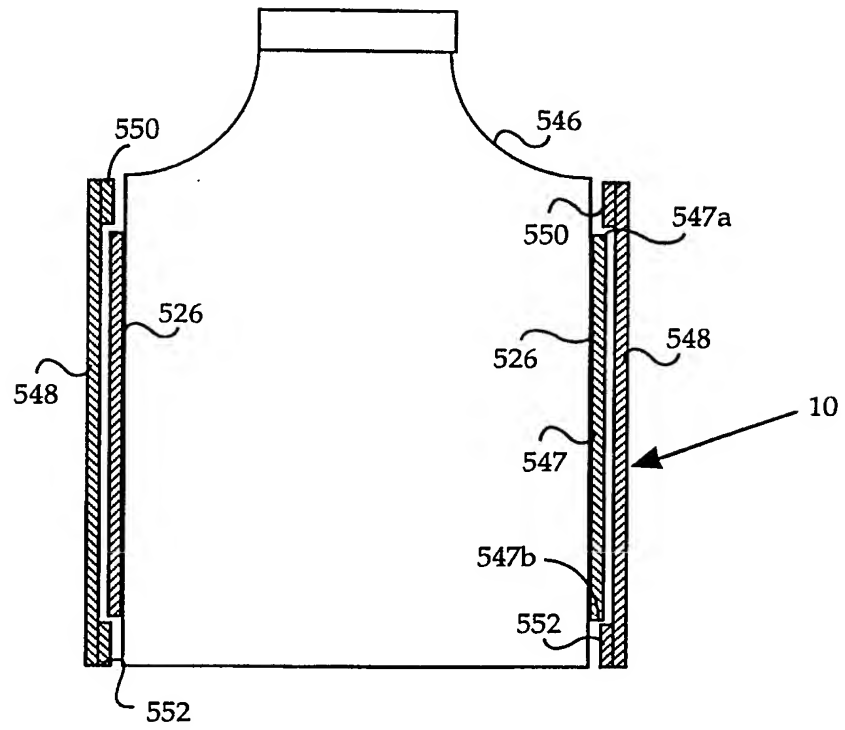


Fig. 6

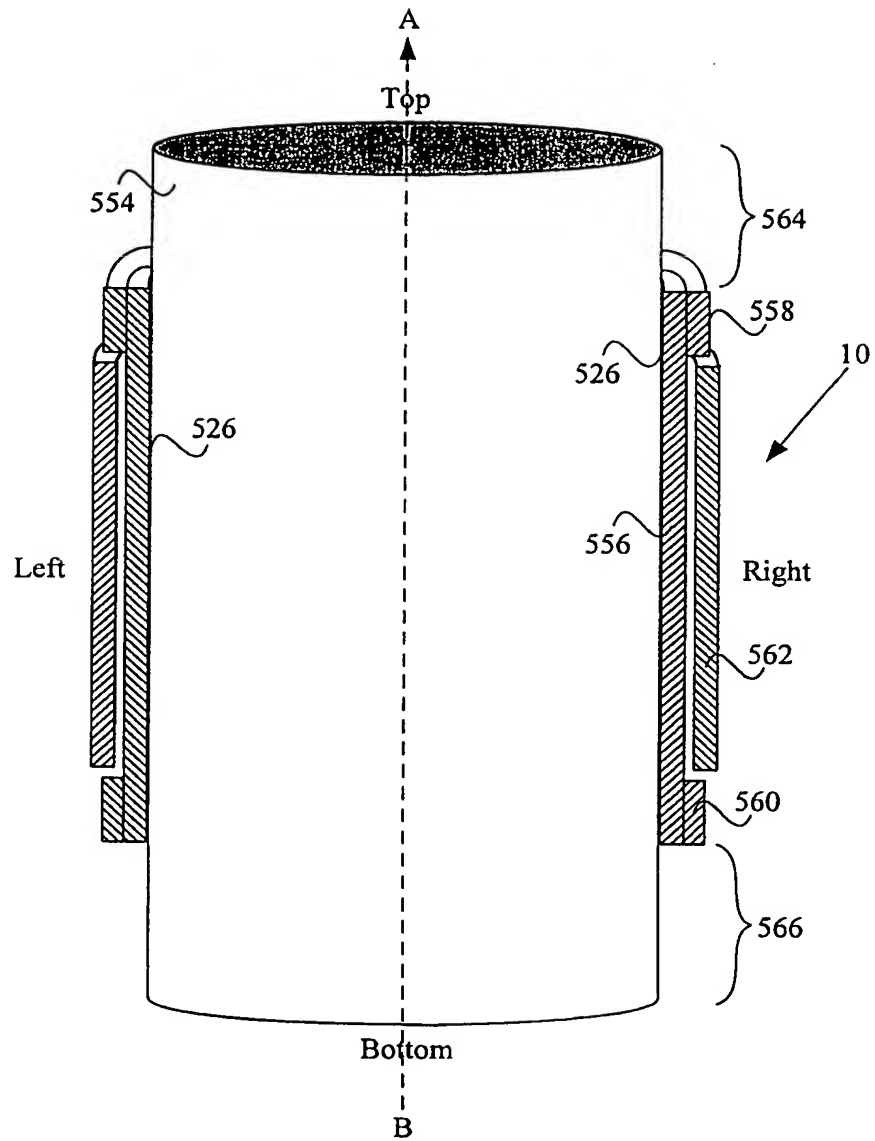


Fig. 7

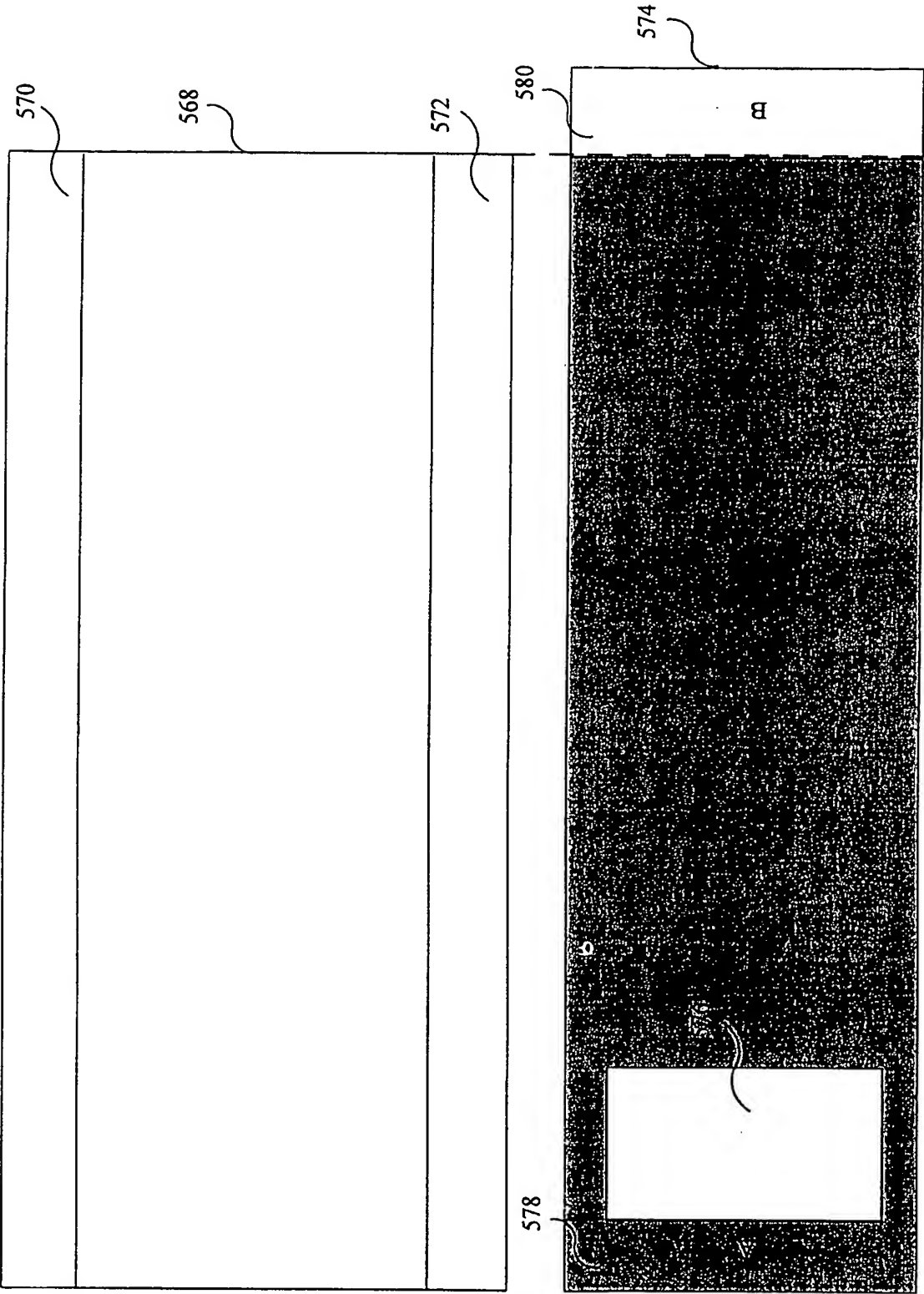


Fig. 8

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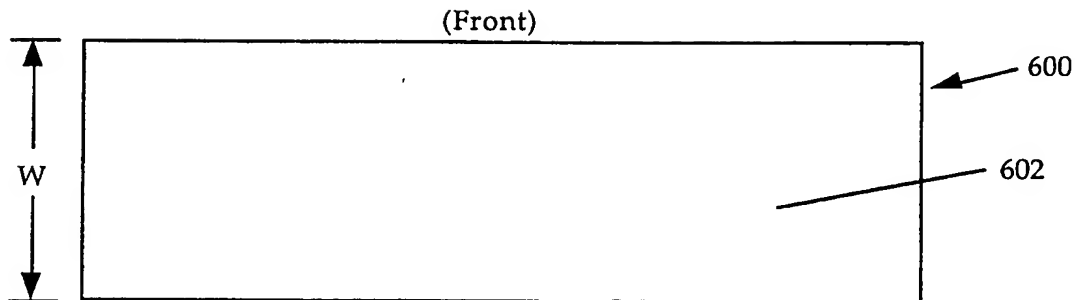


Fig. 9

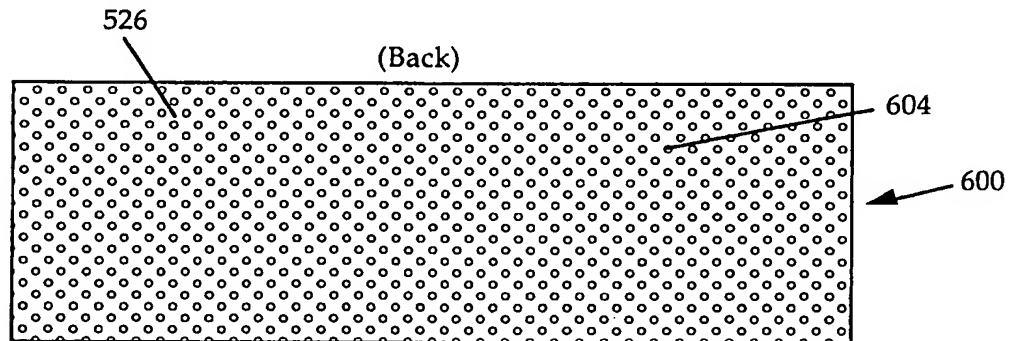


Fig. 10

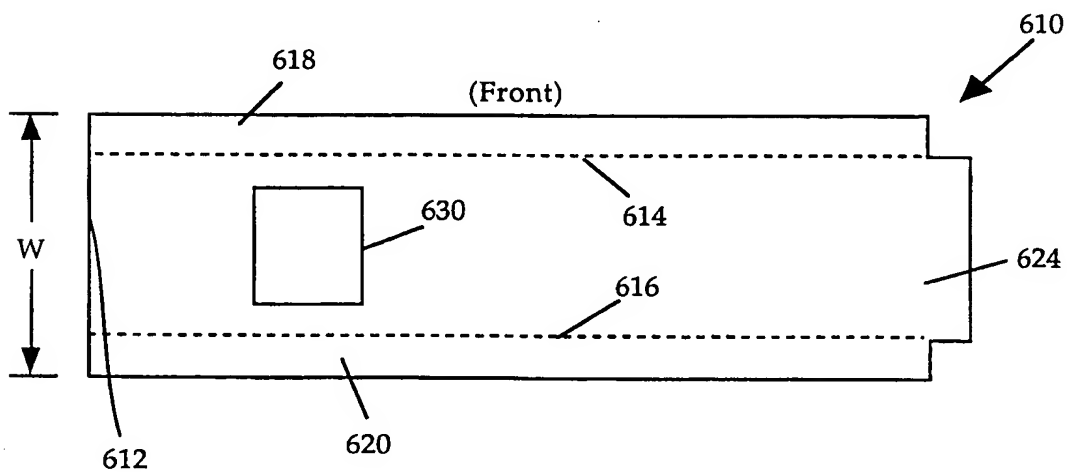


Fig. 11

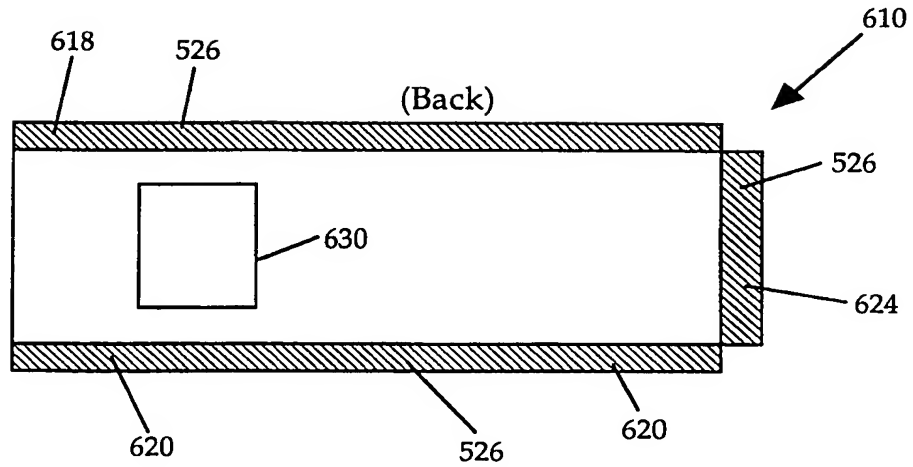


Fig. 12

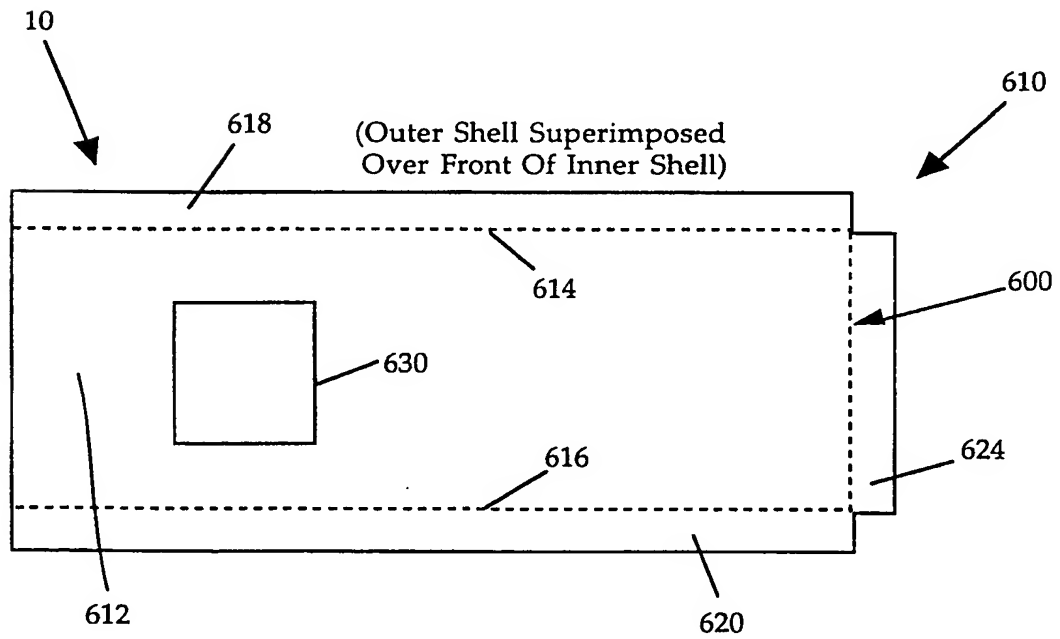


Fig. 13

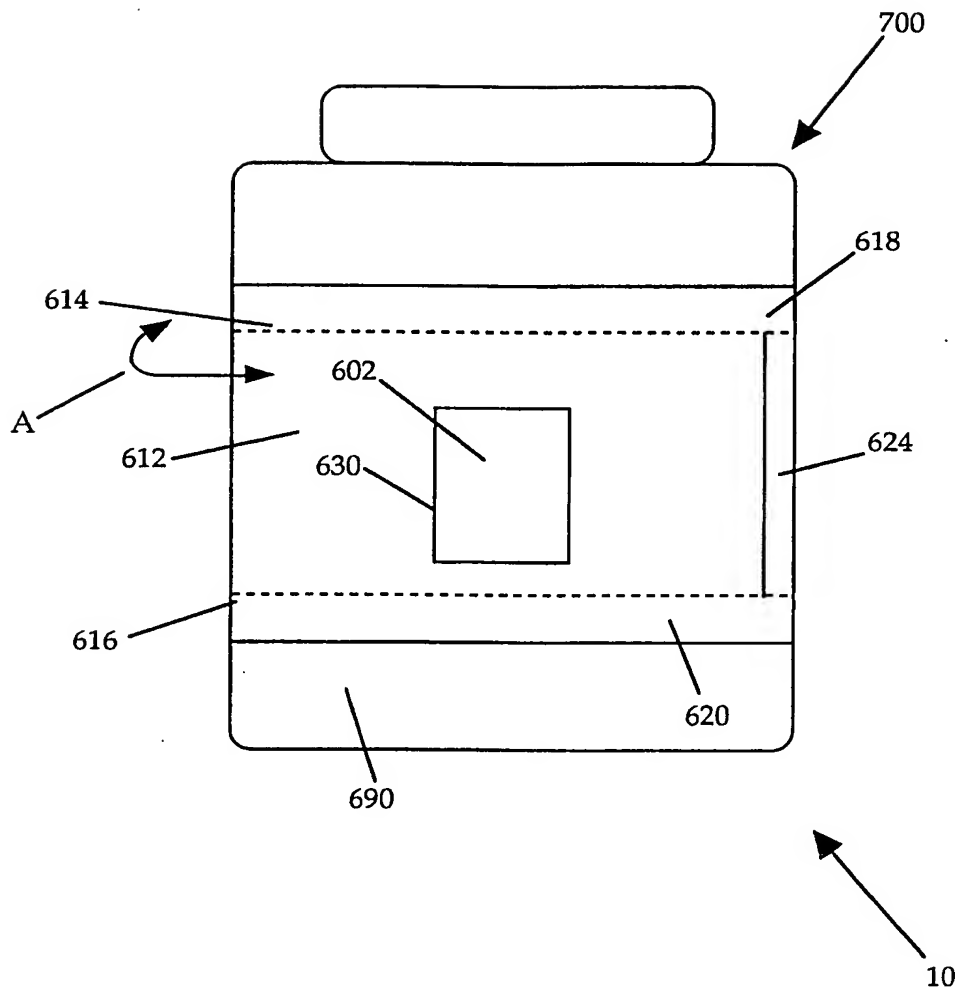


Fig. 14

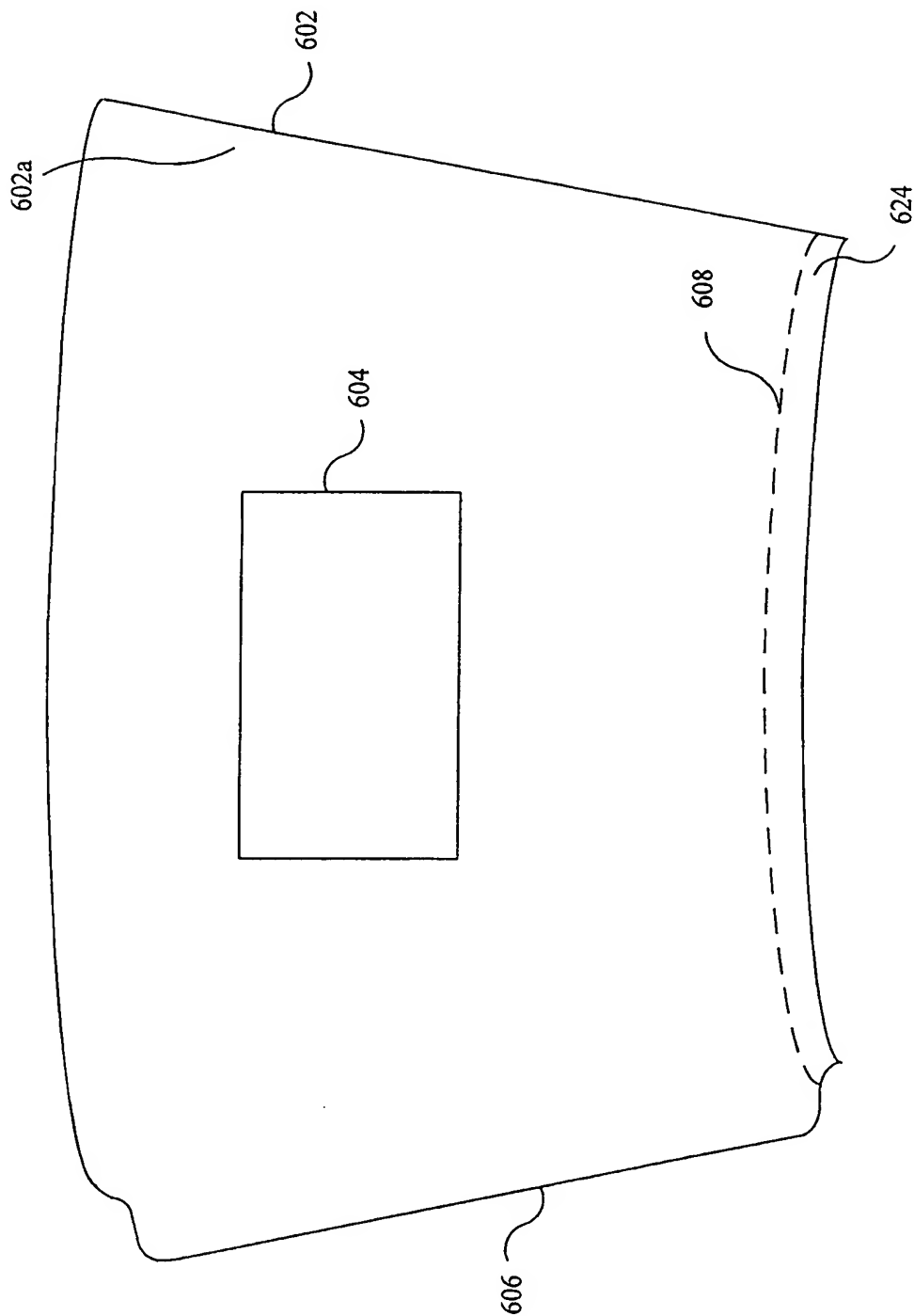


Fig. 15

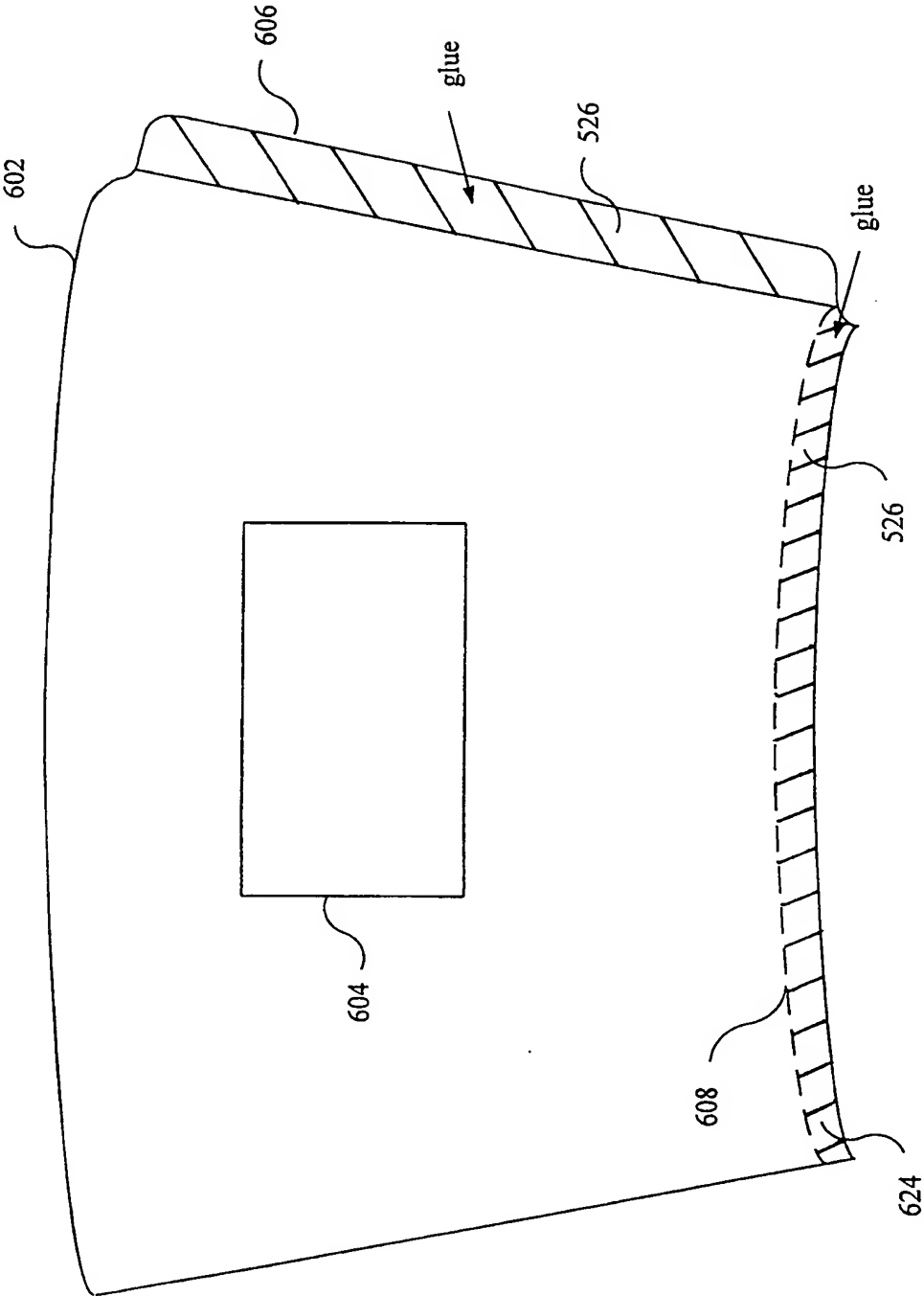


Fig. 16

Fig. 17

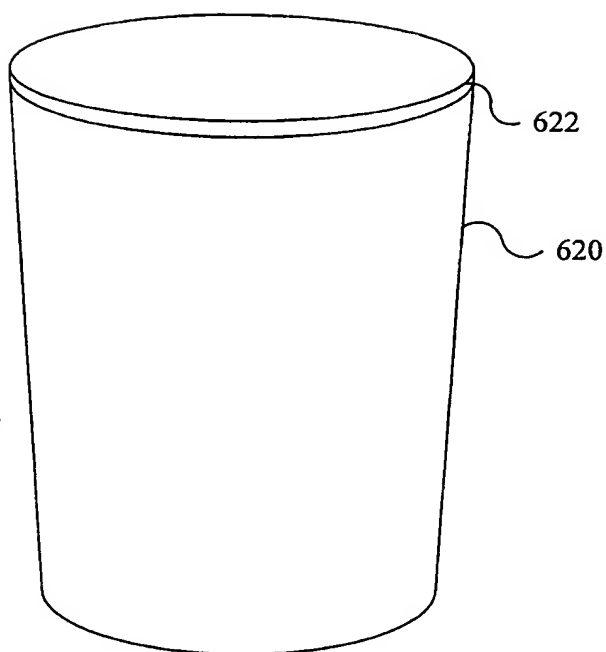
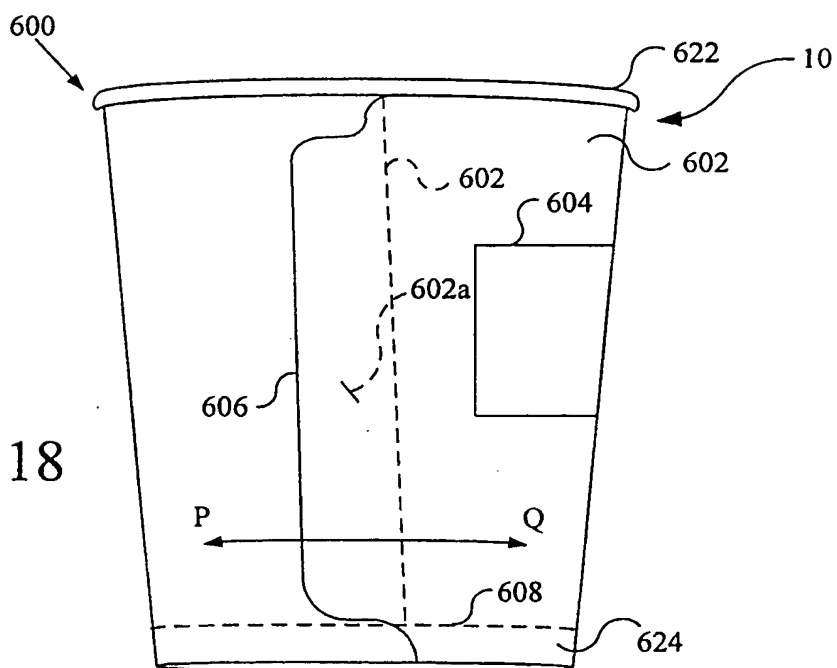


Fig. 18



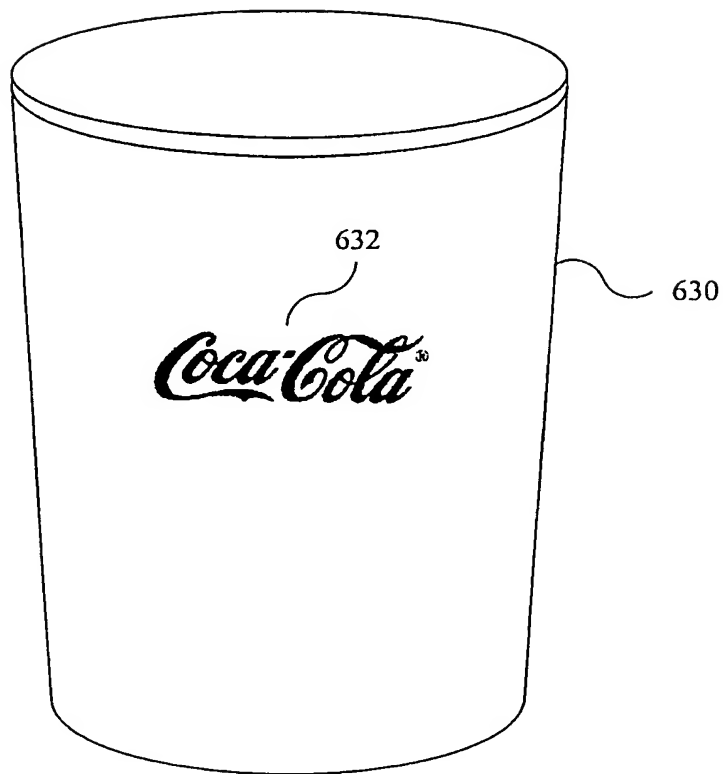


Fig. 19

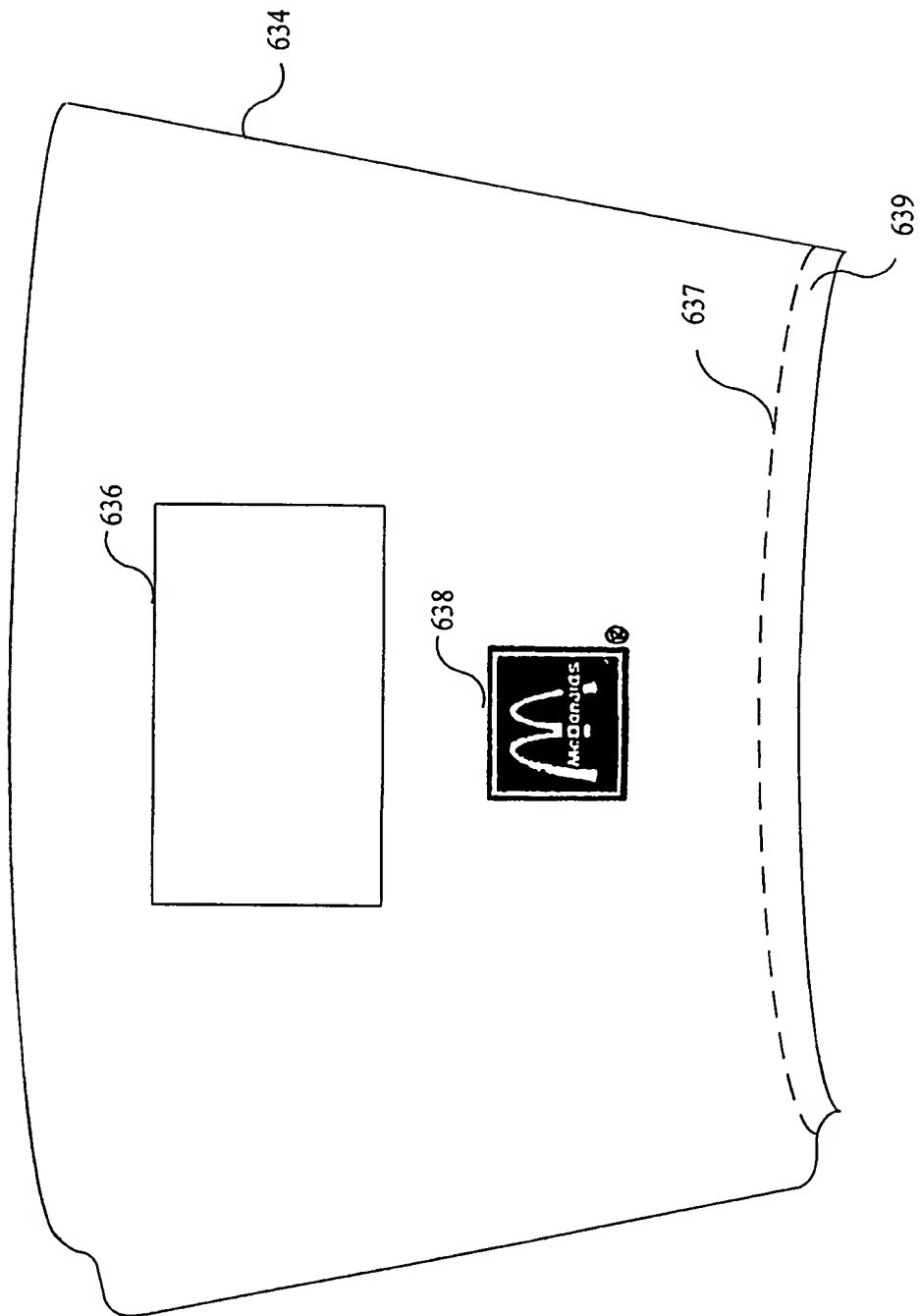


Fig. 20

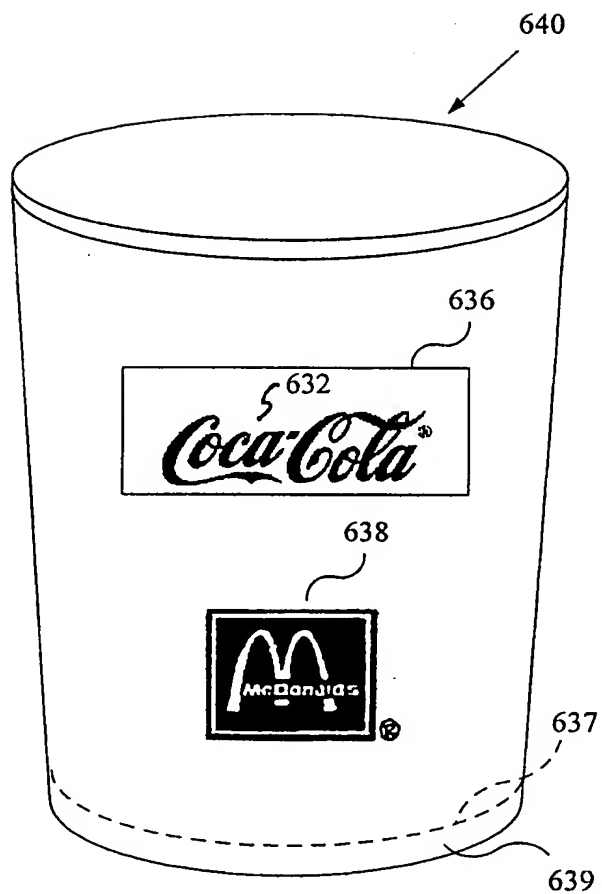
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Fig. 21

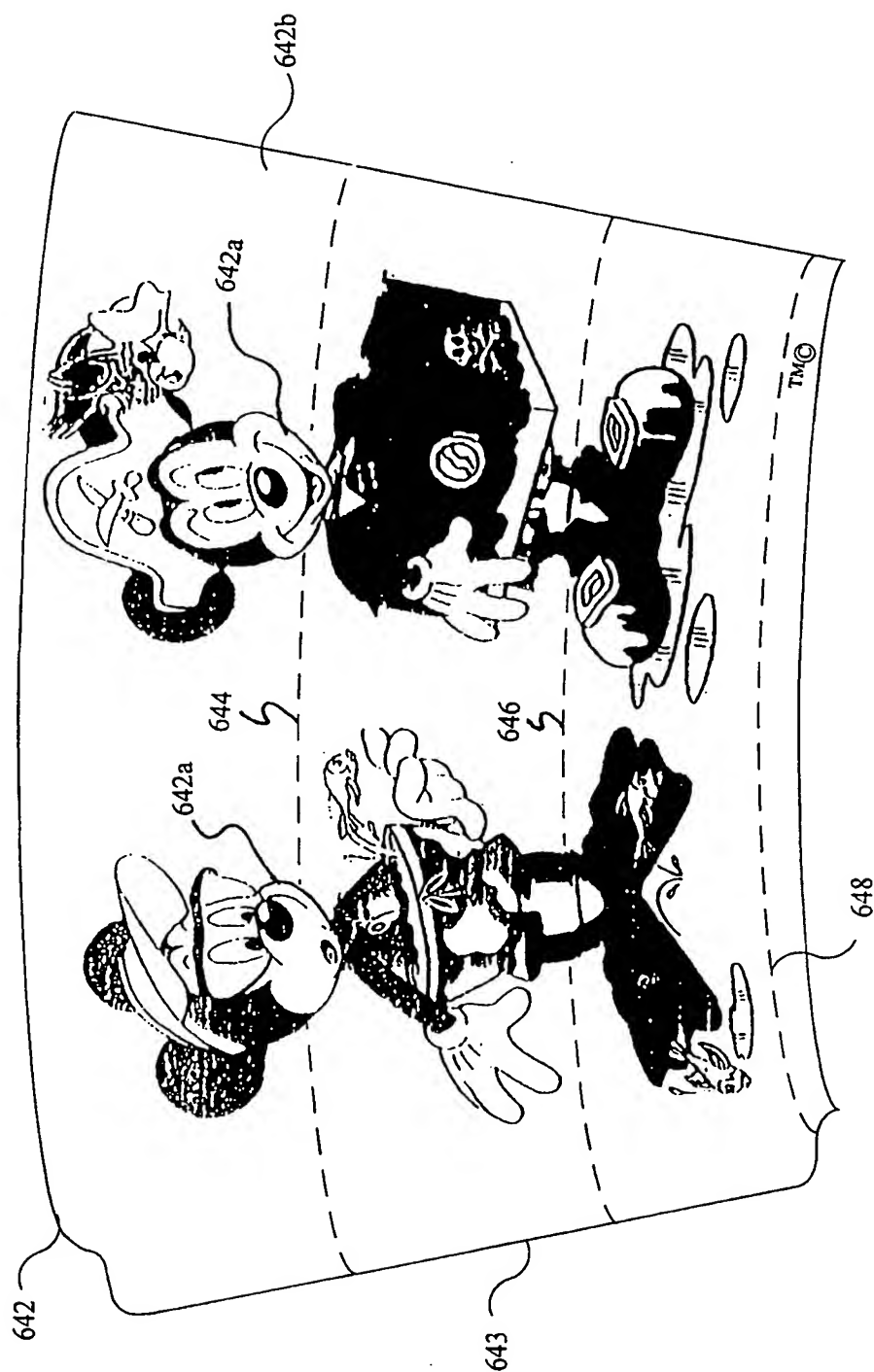


Fig. 22

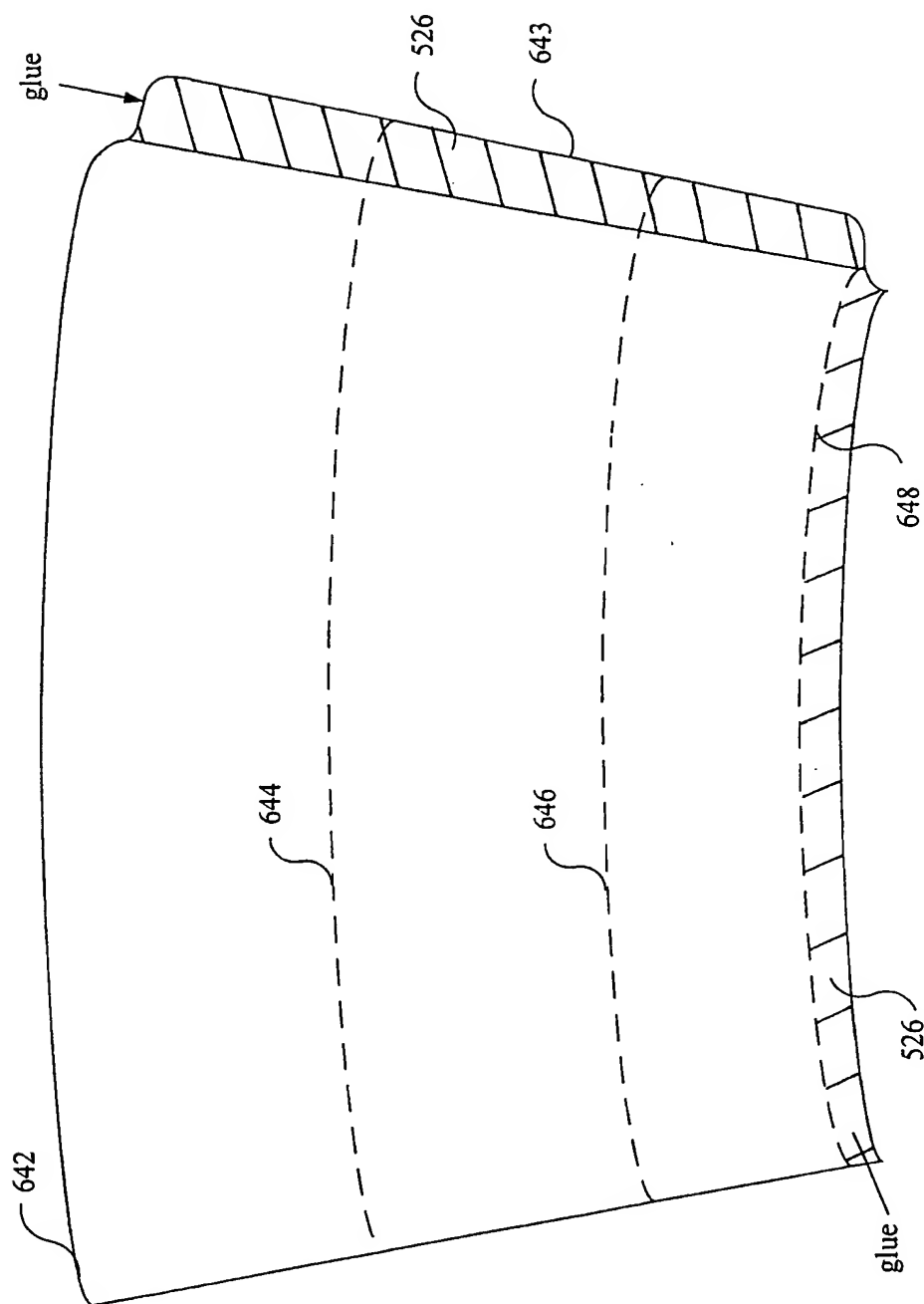
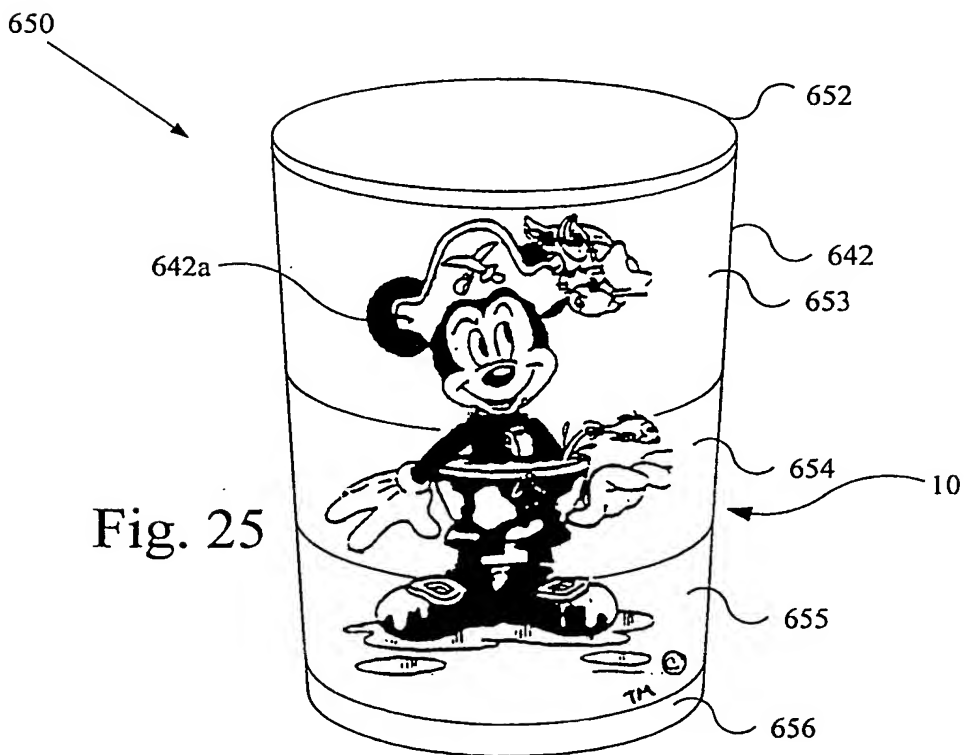
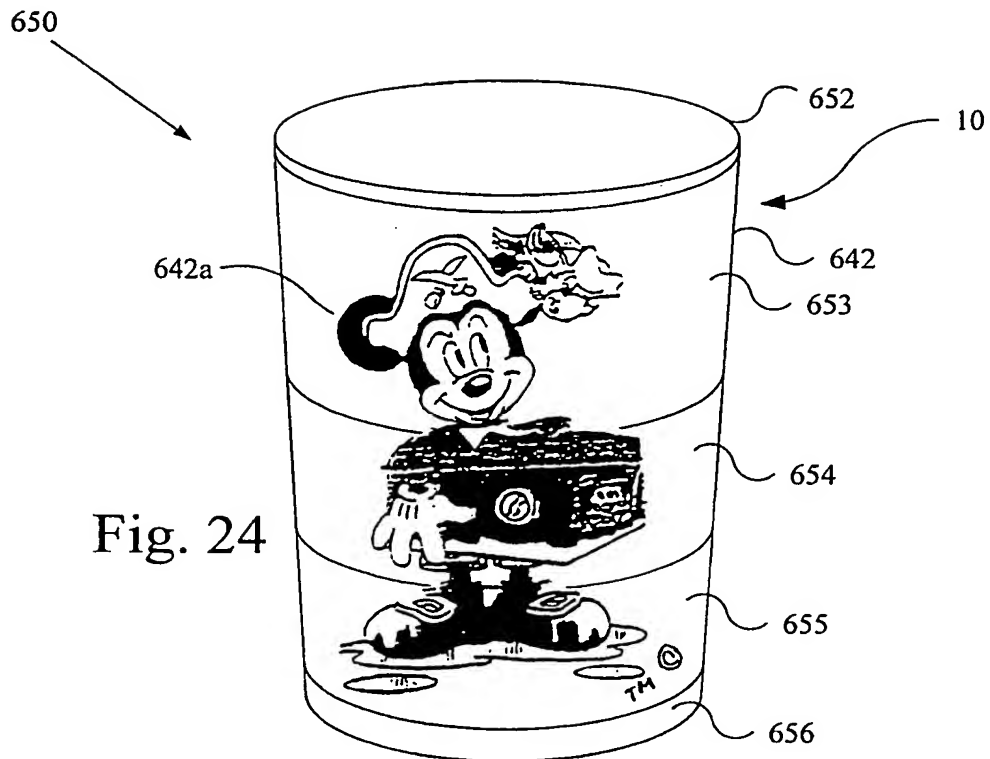


Fig. 23



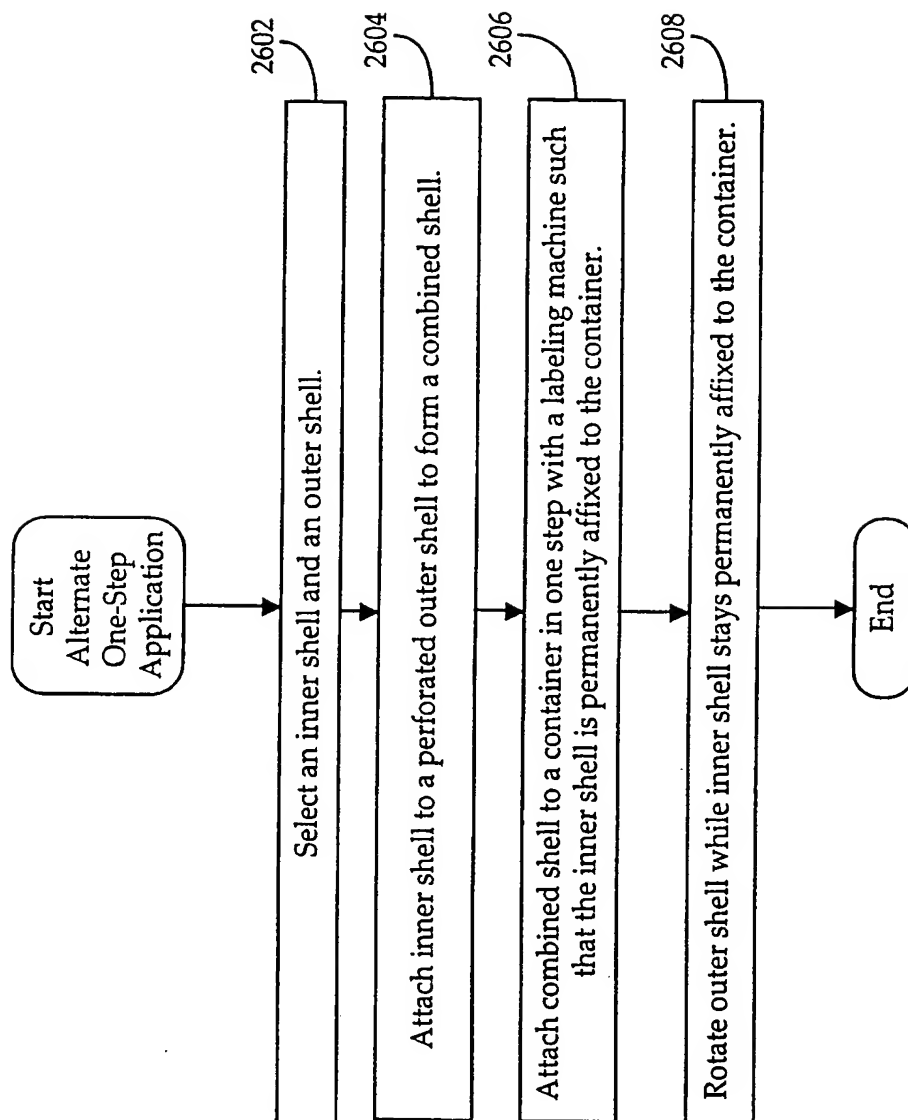


Fig. 26

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US97/19901

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :G09F 3/00

US CL :40/306, 486, 493, 335; 446/337,321; 434/402,426,438

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S.

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US, 1,387,625 A (STEIN) 16 AUGUST 1921 (16/08/21), SEE FIGURES 1-3	1-8, 11, 14
X	US, A, 1,334,031 (HAHN) 16 MARCH 1920 (16/03/20), SEE FIGURE 3, PAGE 2, LINES 43-61	1-8
A	US, A, 2,860,431 (BARNUM, JR.) 18 NOVEMBER 1958 (18/11/58), SEE FIGURES 1-2	1-17

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents	** later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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E earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*Z* document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 24 FEBRUARY 1998	Date of mailing of the international search report 10 MAR 1998
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer CASSANDRA DAVIS Telephone No. (703) 308-2168

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